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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,850	02/16/2001	Gunnar Larsson	040091-003	3836

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EXAMINER

BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 04/08/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,850

Applicant(s)

LARSSON ET AL.

Examiner

Majid A Banankhah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3, 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application filed on April 25, 2000. Claims 1-35 are considered for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Barkhordarian (WO 88/08162, hereinafter Barkhordarian).

Claims 1 and 16	
A method/apparatus [1/16] for processing data in a multi-processor environment, comprising the steps of: building an application chain comprising at least one application to be performed on the data	The system of Barkhordarian, See Abstract “various tasks performed serially specific portions which perform specific computational tasks”, See also page 6, lines 15-36, and continued on page 7, lines 1-24.
adding program information to the received data for identifying a current application in the application chain to be performed on the data; forwarding the data to an available processor in the multi-processor environment;	Page 9, lines 5-20, information that are included at the start of each program module.
processing the data on the available processor using the current application identified by the added program information; and updating the processed data with new program information identifying a next application in the application chain to be performed, if any,	Page 9, lines 5-20, and page 10, lines 1-6, downloaded to the processing unit. The step of identifying the next application is inherent because, without that there is no data flow logic.

wherein the forwarding, processing and updating steps are repeated until the data is processed by all applications in the application chain.	See page 14, lines 24-36, continued on col. 15, lines 4-5. The limitation of until the data is processed is inherent because in serializing task execution the goal is to finish the processing of the task.
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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-15, and 17-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barkhordarian (WO 88/08162, hereinafter Barkhordarian) as applied to claims 1 and 16 above, and further in view of Brendenberg (U.S.Pat. No. 5,826,253, hereinafter Brendenberg).

Claims 2 and 17	
the data is received in the form of packets, each packet including both a header for storing the added and updated program information, and a payload for storing the received and processed data.	<p>While Barkhordarian teaches of packets (page 7, lines 5-9), he does not teach of header and payload.</p> <p>Brendenberg teaches of header and slots for actual data record (See Brendenberg, col. 31, lines 48-62) for the reason to be able to identify a program module when calling or forwarding data to that program module.</p> <p>Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to designate a header area at the beginning of a program module for identification purposes. The</p>

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	modification is obvious because the task of searching all the data to identify a module is very inefficient.
Claims 3 and 18	
forwarding code for the current application from at least one code server operating in the multi-processor environment to the available processor for use in processing the data if the code for the current application is not already installed on the available processor.	The reference of Barkhordarian teaches of forwarding code in page 12, lines 15-33 (data is to be sent and the request to send data).
Claims 4 and 19	
of removing the code for the current application from the available processor after the data has been processed.	Barkhordarian teaches of outputting data between application modules (col. 12, lines 15-33). It would have been obvious to remove the data once the selected processor is done with processing because the serialization would be meaningless if data is stayed after processed by a particular processor. See also connectivity in page 9, lns. 5-20.
Claims 5 and 20	
of retrieving additional data needed for performing the application from an address location determined using the program information	See Barkhordarian in col. 13, lines 14-35.
Claims 6 and 21	
storing at least one of the processed data, the program information, and an output state of the available processor at an address location determined using the program information after processing of the data by the current application is completed	See Barkhordarian, col. 13, lines 15-35 (data address register and counter and providing sequential address)

Claims 7 and 22	
wherein the step of building an application chain comprises of the steps of forming a link for each of the at least one applications in the application chain,	See Barkhordarian, page 6, lines 15-36, "arcs" which represent channel for data flow.
the link having information comprising: a	The system of Barkhordarian, teaches of

processor pool address identifying where in the multi-processor environment the available processor is to be located; an application identifier for the application the link represents;	pooling to find a processor in page 11, lines 24-36 (signal level is passed around the network).
a first pointer identifying one of a previous link in the application chain and an entry point for the data; a second pointer identifying one of a next link in the application and an exit point for the data;	Barkhordarian teaches of pointer in col. 14, lines 25-34, receiver logic and signals to activate other chips.
and a link identifier indicating whether a next link in the application chain includes an application identifier.	Barkhordarian teaches of linking identifier in col. 14, lines 34-36- page 15, and lines 1-11.
Claim 8 and 23	
wherein the program information added to the received data for identifying a current application in the application chain to be performed on the data is the first pointer included in the link corresponding to the current application in the application chain.	Barkhordarian, col. 13, lines 15-35, more significant part of the starting address or page address, and receiver logic on the destination processor.
Claim 9 and 24	
wherein the processor pool address specifies a plurality of processors located within at least one of a communication network, a network node, a magazine of a network node, a media stream board, and a subset of a plurality of processors located on a media stream board.	Barkhordarian teaches of Network node and processors being on separate bus line (See, page 2, lines 1-36, and col. 3, lines 4-6.

Claims 10 and 25	
further comprising the step of storing at least some of the link information in a connection table having a record for each link in the application chain, the record being indexed by the corresponding first pointer and including: the application identifier for the application the corresponding link represents; data	Barkhordarian teaches of connection table in col. TABLE I, and TABLE II. The selection logic of Barkhordarian does teach of priority associated with the application in col. 7, lines 10-24 (lookup table comprises information about the tasks including a listing of the tasks by name and number, their priorities, the starting address

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information for the corresponding link; the priority associated with the application; the link identifier indicating whether the next link in the application chain includes an application identifier; and the corresponding second pointer	of their code in memory and their stack size.
Claim 11 and 26	
a data entry field specifying a number of data entries to be used by the current application; an address field indicating a starting address for a respective entry; length field indicating a length in memory for respective entry;	Barkhordarian teaches of length in memory in col. 7, lines 25-31, the length of the packet and the bytes following thereafter.
read bit indicating whether data should be read from the address of a respective entry and used by the current application when processing the data; and a write bit indicating whether data should be written to the address of a respective entry after execution of the current application.	Reading and writing is inherently taught by Barkhordarian because, without that we cannot locate a processor and transfer data to the processor.
Claim 12 and 27	
certain applications are pre-installed on a plurality of processors operating in the multi-processor environment.	Pre-installing application on a processor is notoriously well known in the art and does not constitute a patentable limitation. Without pre-installing application the average computer user cannot use the system and computers would be limited to persons ordinary in the art of computer science.

Claim 13 and 28	
all applications of a respective application chain are executed on a respective processor of the multi-processor environment	Barkhordarian teaches of a multiprocessor system in page 2, lines 11-18.

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Claim 14 and 29	
wherein the multi-processor environment is a communication system	Barkhordarian, col. 2-3.
Claim 15 and 30	
wherein the applications are media stream applications.	Barkhordarian, page 1, and page 2, lines 4-18.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose voice telephone number is (703) 308-6903. A voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:

Commissioner of Patent and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA, Six Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.

All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052. Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Majid Banankhah

3/21/04


MAJID BANANKHAH
PRIMARY EXAMINER